

Application No. 09/772,617

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GROUP 1600**REMARKS**

Claims 1 to 9 and 67 to 73 are pending in the application. Claims 1 to 9 and 67 stand rejected under 35 U.S.C. §112, first paragraph, as containing subject matter that was not described in the specification in such a way as reasonably to convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Claims 1, 4, and 68 to 73 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing particularly to point out and distinctly to claim the subject matter that Applicants regard as the invention.

With respect to the rejection under §112, first paragraph, the Examiner has stated that in claim 1, the term "chromophore" is not defined in the specification so as to ascertain the structures of the compounds that are included or excluded by the term, and that the specification has therefore failed to provide adequate support for claims 1 to 5 as written. The Examiner has also stated that the specification on page 6, lines 13 to 18, lists preferred chromophores and examples of chromophores, but that this list is not comprehensive and does not consist of all chromophores encompassed in claim 1.

Applicants point out that claim 1 is intended to encompass compounds wherein R<sub>1</sub> is any chromophore that absorbs light from the visible wavelength range, including, but not limited to, those listed in the specification. Applicants agree that the list does not consist of all chromophores encompassed in claim 1. Applicants disagree with the Examiner's apparent position that R<sub>1</sub> should be limited to those chromophores explicitly disclosed in the specification. The first

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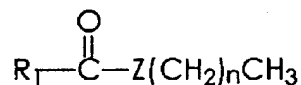
sentence of the second paragraph of §112 is essentially a requirement for precision and definiteness of claim language. If the scope of subject matter embraced by a claim is clear and if Applicants have not otherwise indicated that they intend the claim to be of a different scope, then the claim particularly points out and distinctly claims the subject matter which Applicants regard as their invention. In re Borkowski et al., 422 F.2d 904, 164 U.S.P.Q. 642 (CCPA 1970); In re Robins, 429 F.2d 452, 166 U.S.P.Q. 552 (CCPA 1970). Applicants are entitled to broad claims commensurate in scope with the invention as disclosed. See In re Kamal et al., 398 F.2d 867, 158 U.S.P.Q. 320 (CCPA 1968). Having clearly disclosed in the specification that R<sub>1</sub> is any chromophore that absorbs light from the visible wavelength range, and having provided a broad range of classes of chromophores as examples of suitable R<sub>1</sub> groups, Applicants are entitled to claims of the present scope, and respectfully request reconsideration and withdrawal of this ground for rejection.

With respect to the rejection under §112, first paragraph, the Examiner has also stated that claim 1 defines "n" as an integer that is at least 39, that the specification defines "n" as an integer that is at least 12, that although the definition of "n" in the specification encompasses "n as an integer that is at least 39", it does not specifically define or exemplify n having a lower limit of 39, and that because Applicant has not shown a reason for n having a lower limit of 39, this limitation is new matter.

Applicants disagree with this position. As stated in the previous Amendment, support for this amendment to the claims can be found in the specification as filed at, for example, page 4, lines 4 to 9,

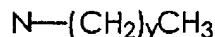
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and page 4, line 28 to page 5, line 5. More specifically, at page 4, lines 3 to 8, the specification states that "[t]he new colorants have a substantial amount of hydrophobic character. In one aspect, the hydrophobic character is imparted by incorporating at least one alkyl or alkoxyate chain that is at least 13 carbon units long into colorants of the present invention. In particular embodiments, the alkyl or alkoxyate chain is at least 20 carbon units long, and in other embodiments at least 40 carbon units long." Applicants point out that in the compounds of the present invention of the formula



an alkyl chain at least 40 carbon units long is present when  $n$  is at least 39. Accordingly, Applicants are of the position that the amendment to the claims in the previous Amendment to recite that  $n$  is at least 39 does not constitute new matter, and respectfully request reconsideration and withdrawal of this ground for rejection.

With respect to the rejection under §112, second paragraph, the Examiner has stated that claim 4 recites the limitation wherein  $Z$  is

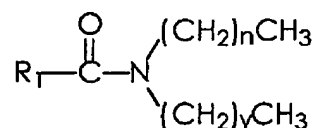


and is of the position that there is insufficient antecedent basis for the limitation of " $y$ " in the claims, in that claim 4 is dependent on claim 1 and " $y$ " is not defined in claim 1.

Applicants point out that claim 4 recites a specific instance of the general group " $Z$ " recited in claim 1, and that this specific

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instance includes the use of a new variable, namely "y". Since this variable appears only in claim 4, there is no reason for it to be recited in claim 1. The variable "y" is clearly defined in claim 4 to be an integer of from 0 to 300, and is clearly stated to be a variable that be either the same as or different from the variable "n" recited in claim 1. For the sake of clarification, Applicants point out to the Examiner that claim 4 is reciting a compound according to claim 1 wherein Z is as specified; in other words, claim 4 recites compounds of the formula

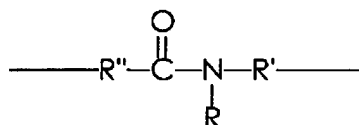


wherein "n" and "y" are each as specified in the claims. Accordingly, Applicants respectfully request reconsideration and withdrawal of this ground for rejection.

With respect to the rejection under §112, second paragraph, the Examiner has also stated that claim 1 defines Z as an atom or group of atoms, said atom or group of atoms including at least one atom selected from the group consisting of C, O, N, and S, and is of the position that this definition of Z is broad and confusing because one cannot determine what is meant by "a group of atoms" in the definition of Z. The Examiner questions whether a group of atoms is a sulfonyl group, an amide, an alkyl group, a carboxy group, or the like. In addition, the Examiner has questioned, when Z and the carbonyl are comprised by a common ring, how many atoms are in the ring and whether the ring is monocyclic or bicyclic.

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Applicants point out that any group of atoms that meets the definition recited in claim 1 is within the scope of that claim. Since, as the structure in claim 1 is drawn, Z is divalent, any divalent group of atoms containing at least one atom selected from the group consisting of C, O, N, and S would satisfy this claim language. Accordingly, in response to the Examiner's question about whether Z could be an alkyl group, Z could indeed be a divalent alkylene group. In addition, Z could indeed be a divalent amide moiety, such as, for example, a group of the formula



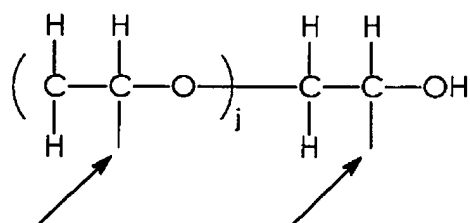
wherein R, R', and R'' are each, for example, hydrocarbon groups with or without heteroatoms therein or substituents thereon, or the like, and wherein R could also be a hydrogen atom. Similarly, one or both of R' and R'' could be missing from this exemplary group of atoms and the group of atoms would also be within the scope of claim 1. Further, Z could also be a divalent group which is or includes a sulfonyl group, a carboxyl group, or the like. Applicants are of the position that one of ordinary skill in the art would have no difficulty in ascertaining the scope of this claim language. Similarly, Applicants are of the position that one of ordinary skill in the art would understand that, when Z and the carbonyl group comprise a ring, any number of atoms can comprise the ring without limitation, and that monocyclic, bicyclic, and other cyclic entities are contemplated. Even if the claims are broad enough to include materials that could not be used to produce the claimed

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invention, the claims are not too vague regarding future enterprise, since the claims inform potential inventors that any material that does work to produce the invention is covered by the patent, and the patent is construed to include all materials that would produce the invention. Charvat v. Commissioner of Patents, 182 U.S.P.Q. 577 (D.C. Cir. 1974). The possibility of inclusion of inoperative substances in a claim does not prevent allowance of broad claims. In re Kamal et al., 158 U.S.P.Q. 320 (CCPA 1968). Accordingly, Applicants respectfully request reconsideration and withdrawal of this ground for rejection.

With respect to the rejection under §112, second paragraph, the Examiner has also stated that in claims 68 and 69, the definition of Z is confusing in that it is unclear what is meant by the statement that "Q can vary amongst different alkyl and aryl groups within the chain", and that one cannot determine where the variable Q appears in the structure of the compounds of claims 68 to 73.

Applicants are of the position that this claim language clearly conveys that at the following two locations shown by the arrows



there can be present either a hydrogen atom or a group "Q", which is either an alkyl group or an aryl group, and that different oxyalkylene moieties within the chain can have different "Q" groups thereon. As one specific example, the claim encompasses both random and block

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copolymeric chains of ethylene oxide (wherein a hydrogen atom is present at the indicated site) and propylene oxide (wherein a methyl group is present at the indicated site). Applicants are of the position that one of ordinary skill in the art would have no difficulty in understanding the scope of this claim as written, and accordingly respectfully request reconsideration and withdrawal of this ground for rejection.

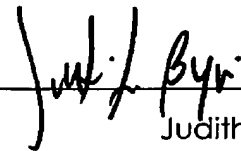
Applicants believe that the foregoing amendments and distinctions place the claims in condition for allowance, and accordingly respectfully request reconsideration and withdrawal of all grounds for rejection.

No additional fee is believed to be required for this amendment. However, the undersigned Xerox Corporation attorney (or agent) hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Corporation Deposit Account No. 24-0025. This also constitutes a request for any needed extension of time and authorization to charge all fees therefor to Xerox Corporation Deposit Account No. 24-0025.

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In the event the Examiner considers personal contact advantageous to the disposition of this case, she is hereby authorized to call Applicant(s) attorney, Judith L. Byorick, at Telephone Number (585) 423-4564, Rochester, New York.

Respectfully submitted,



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